## REMARKS/ARGUMENTS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 42-84 remain pending and claims 42 and 60 remain independent.

### A. § 103 REJECTION – CHEN, NIEMELA

Claims 42-43, 46, 52-54, 56-61, 64, 70-73, and 75-84 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chen (U.S. Publication 2003/0161284 A1) in view of Niemela et al. (WO 03/049482 A1), hereinafter referred to as "Niemela". Applicants respectfully traverse.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142.* One requirement to establish *prima facie case* of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j).* Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In the invention as claimed in claim 1, combining/splitting functionality is moved from RNC in the radio network layer to routers in the transport network layer. An example is illustrated in Figure 4 of the present disclosure. On the left side of Figure 4, the combining/splitting function is performed by the RNC. This conventional way of achieving macrodiversity is costly in that much transmission resources are consumed in the transport network. The

conventional way results in significant cost for the operators. *See specification, page 4, lines 26-30.*

In contrast, as recited in independent claim 42, the combining/splitting functionalities are moved from the RNC into the routers within the transport network as illustrated on the right side of Figure 4. This makes possible to reduce the required transmission resources, and thus lessening costs. Note the routers are separate from the RNCs and separate from the Node Bs.

This is reflected in independent claim 42, which recites, in part "a router ... comprising: means for splitting one input downlink DCH traffic flow originating from the RNC into at least two output downlink DCH traffic flows by using an IP multicast protocol." Independent claim 60 recites a similar feature.

With regard to independent claims 42 and 60, Final Office Action alleges that Chen teaches a router and refers to paragraphs [0067]–[0072]. Final Office Action also refers to Figure 1 and paragraphs [0007]-[0008] to allegedly teach connection through routing which involve routing through one or more RNC, Node B. *See Final Office Action, second paragraph of item 4 on page 3.*

As amply demonstrated in the Amendment submitted on July 11, 2008 in response to First Office Action of May 7, 2008, at best, Chen discloses performing combining/splitting functions at the RNCs only. *See e.g., Chen, Figures 2 and 3; paragraphs [0049], [0054], [0068], etc.*

Final Office Action states "Chen teaches claimed limitation as discussed above **but is silent on** means for splitting (within a router) one DCH traffic flow

into at least two DCH flows by using an IP multicast protocol." *Emphasis added in Final Office Action; first paragraph on page 4.*

But again, it was amply demonstrated in July 11, 2008 Amendment that the relied upon portions of Niemela is also similarly deficient. For example, Niemela explicitly indicates that the combining/splitting functions are performed at elements 204A, 204B (*see Abstract*) and Figure 2 makes clear these elements are RNCs.

Clearly, *prima facie* case of obviousness is not established in Final Office Action. Specifically, there is no demonstration that any element other than RNCs can perform combining/splitting functionalities. Despite this, rejections are maintained. Final Office Action refers to following portions of Niemela – Abstract, page 3, lines 17-30, page 4, lines 20-25 and page 5, lines 1-21. *See Final Office Action, Response to Arguments.*

Niemela's Abstract mentions combining/splitting point 204A, 204B, but as noted above, these are RNCs.

Page 3, lines 17-30 merely describes an arrangement for controlling information transfer comprising a radio system and a terminal equipment (e.g., mobile station MS) using the radio system. Radio system includes at least two transceivers, one is a primary transceiver and others are secondary transceivers. Radio system also includes a combining-splitting point. However, page 3, lines 17-30 does not describe any specifics regarding the combining-

splitting point. As noted, Abstract and corresponding figures suggest that the RNC is the combining-splitting point.

Page 4, lines 20-25 defines a transceiver as a radio network element which has a bi-directional radio link to a terminal equipment. In other words, the transceiver is a base station.

Page 5, lines 1-21 describes that the terminal equipment has a busy connection with a primary base station (with a primary transceiver) and a quiet connection with a secondary base station (with a secondary transceiver). Page 5, lines 1-21 also describes that the combining/splitting functionalities can be located in either SRNC, DRNC, or at Node B level.

It can be seen that none of the relied upon portions of Niemela as well as Chen describes the combining/splitting being performed by a router.

There appears to be two possibilities for the rejections to be maintained despite this clear showing that *prima facie* case is not established. First, the phrase "within the router" is not given any consideration or weight at all. To the extent no consideration is given, this is clearly improper.

Second possibility is that Final Office Action somehow considers either the RNC or the base station as being equivalent to the router as recited. This is also improper. One of ordinary skill would realize that RNC, router, and base station are all different. Thus, alleging that RNC and/or base station is equivalent to the router is unreasonable.

Nevertheless, to make this distinction explicit, independent claims are amended to recite "wherein the router is separate from both the RNC and the Node Bs." This makes clear that routers are not the same as either the RNC or Node Bs. Since Final Office Action has not demonstrated that the combining/splitting functionality is performed by elements other than RNCs or Node Bs, claims 42 and 60 are distinguishable for this reason alone.

To provide even further distinction, independent claim 42 is amended to recite "means for splitting one input downlink DCH traffic flow originating from the RNC into at least two output downlink DCH traffic flows by using an IP multicast protocol" and "wherein each output downlink DCH flow carries user data destined to a same end user equipment." Independent claim 60 is similarly amended.

As recited, when a split occurs, all resulting flows carry user data. This is in clear contrast with Niemela, which is focused on reducing the amount of additional network traffic caused by splitting a flow. In Niemela, only one of the paths at the split is used to transfer user data. In the other paths, only the control channels are still transmitted.

In page 5, lines 1-21 specifically relied upon in Final Office Action, Niemela states:

> With a primary base station with which the terminal equipment has a **busy connection,** the terminal equipment has an active data transfer connection **where transmission of user data is possible.** With a secondary base station the terminal has a **quiet connection**, i.e., a connection has been set up, but

> **transfer of information is blocked at least with respect to user data.** *Emphasis added; See also page 7, lines 20-36.*

That is, only one connection path – the path through the primary base station – carries user data. All other connection paths carry only control information. According to Niemela, this provides a very important advantage. Niemela states:

> The arrangement according to the invention provides an advantage that transfer of unnecessary information can be reduced in the radio system between the secondary transceivers and the combining-splitting point. The smaller amount of information to be transferred result in lower capacity needed and thus to savings in money. *See page 6, lines 1-5.*

Thus, restricting user data transmission to a single path is a critical feature in Niemela. This allows the network resources to be conserved. To do otherwise renders Niemela unsatisfactory for its intended purpose.

Thus, when combined, Chen and Niemela teaches combining/splitting – at either the RNC or the base station – in which only one path carries user data. This is in complete contrast to the features of independent claims 42 and 60. For at least these reasons, claims 42 and 60 are distinguishable over Chen and Niemela.

Claims 43, 46, 52-54, 56-59, 61, 64, 70-73 and 75-82 depend from independent claims 42 and 60, directly or indirectly, and recite further distinguishing features. Therefore, these dependent claims are distinguishable over the combination of Chen and Niemela.

Applicants respectfully request that the rejection of claims 42-43, 46, 52-54, 56-61, 64, 70-73 and 75-82 based on Chen and Niemela be withdrawn.

**B. § 103 REJECTION – CHEN, NIEMELA, HAGGERTY**

Claims 44-45, 47-51, 55, 62-63, 65-69, and 74 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chen in view of Niemela, and in further view of Haggerty (U.S. Patent 6,331,983 B1). Applicants respectfully traverse.

Claims 44-45, 47-51, 55, 62-63, 65-69 and 74 depend from independent claims 42 and 60. It is demonstrated above that independent claims 42 and 60 are distinguishable over Chen and Niemela. Haggerty does not correct above noted and other deficiencies of Chen and Niemela. Therefore, independent claims 42 and 60 are distinguishable over the combination of Chen, Niemela, and Haggerty.

Dependent claims 44-45, 47-51, 55, 62-63, 65-69 and 74 recite further distinguishing features. Accordingly, these dependent claims are also distinguishable over the combination of Chen, Niemela, and Haggerty.

Applicants respectfully request that the rejection of claims 44-45, 47-51, 55, 62-63, 65-69 and 74 based on Chen, Niemela, and Haggerty be withdrawn.

## C. CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee is attached hereto.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Respectfully submitted,

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